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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,439	06/26/2003	Subodh K. Raniwala	0899-0017	2930

47050 7590 05/23/2006

RYNDAK & SURI LLP
200 W MADISON STREET
SUITE 2100
CHICAGO, IL 60602

EXAMINER	
KUHNS, SARAH LOUISE	

ART UNIT	PAPER NUMBER
1761	

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/606,439	RANIWALA, SUBODH K.	
	Examiner	Art Unit	
	Sarah L. Kuhns	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 15, 17, 24, 25, 27-31, 38, 39, and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mussi et al. (US 5358872), in view of Gere (US 1925443) and Doulgheridis (US 2997397).

Mussi et al. teach a cap with a hole in the top (i.e. items 20/23 of Figure 4), a PTFE membrane secured to the hole (item 22 of Figure 4) with the hole covered by an air tight seal utilizing a pressure-sensitive adhesive above the hole that includes acrylic adhesives, which are semi-transparent, actinic and UV radiation curable and dryable (seal includes item 32 of Figure 4). Furthermore, because the cap is secured to the neck of the container, the container includes a hole through the headspace (i.e. the neck of the container) with the membrane and air tight seal secured to the hole of the container (Column 2, lines 18-46,Column 5, lines 25-61).

Mussi does not teach or suggest filling a hole with sealing material to form an air tight seal. However, Doulgheridis discloses the use of a solid fusible material that, upon melting, creates an air tight seal on a food container after the air has been exhausted from the inside of the container (column 6, lines 20-30). Additionally Gere discloses sealing a container with bees wax or resin after air has been expelled (page 2, lines

105-150). Therefore, the filling of holes in food packages following venting of the food product was well known to one of ordinary skill in the art. As such, it would have been obvious to incorporate such a step in the invention of Mussi since several foods are known to become rancid or undergo non-enzymatic browning with prolonged exposure to air.

Claims 15, 18-22, and 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (US 5522155), in view of Gere (US 1925443) and Doulgheridis (US 2997397).

Jones teaches a cap (item 90 of Figure 3) with a hole with a PTFE membrane or a non-woven polyolefin (e.g. includes polypropylene) membrane, of 0.1-3 micron pore size (item 93 of Figure l3lcovered by an air tight seal (item 91 of Figure 13). Furthermore, because the cap is secured to the neck of the container, the container includes a hole through the headspace (i.e. the neck of the container) with the membrane and air tight seal secured to the hole of the container (Column 3, line 13 to Column 4, line 15, Column 5, lines 8-43, Figure 13).

Jones does not teach or suggest filling a hole with sealing material to form an air tight seal. However, Doulgheridis discloses the use of a solid fusible material that, upon melting, creates an air tight seal on a food container after the air has been exhausted from the inside of the container (column 6, lines 20-30). Additionally Gere discloses sealing a container with bees wax or resin after air has been expelled (page 2, lines 105-150). Therefore, the filling of holes in food packages following venting of the food

product was well known to one of ordinary skill in the art. As such, it would have been obvious to incorporate such a step in the invention of Jones since several foods are known to become rancid or undergo non-enzymatic browning with prolonged exposure to air.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Foth (US 5988448), in view of Gere (US 1925443), Doulgheridis (US 2997397), and Bartur (US 5853096).

Foth teaches a cap for releasing the vacuum of a drink container wherein the cap has a hole on the side flange (item 30 in Figures) with a hydrophobic air/gas permeable membrane covering the hole, and the hole sealed by a cap (item 10 in Figure 2). See Column 3-4.

Foth does not teach or suggest filling a hole with sealing material to form an air tight seal. However, Doulgheridis discloses the use of a solid fusible material that, upon melting, creates an air tight seal on a food container after the air has been exhausted from the inside of the container (column 6, lines 20-30). Additionally Gere discloses sealing a container with bees wax or resin after air has been expelled (page 2, lines 105-150). Therefore, the filling of holes in food packages following venting of the food product was well known to one of ordinary skill in the art. As such, it would have been obvious to incorporate such a step in the invention of Foth since several foods are known to become rancid or undergo non-enzymatic browning with prolonged exposure to air.

Bartur et al. also teach caps with hydrophobic gas permeable membranes. Bartur et al. teach including the membranes on the side of a skid portion of the cap (e.g. the Embodiment of Figure 3C, Column 3, line 55 to Column 4, line 8, Column 5, lines 35-42). Therefore, it would have been obvious to modify Mussi et al. and include holes on the side section since one would have substituting one hole location for another for the same purpose: container caps with hydrophobic gas permeable membranes.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung (US 4174784), in view of Gere (US 1925443) and Doulgheridis (US 2997397).

Hartung teaches hot filling and capping a polymer container with cooking oil or cranberry juice, providing a closure with a hole covered by a hydrophobic air permeable membrane (i.e. polypropylene), filling the container with hot liquid, applying the closure, and cooling wherein the hole provides a means for equalizing the pressure of the container (Column 1, lines 15-55, Column 2, lines 22-52, Column 3, lines 18-50, Column 4, lines 2-16).

Hartung is silent in teaching providing an air tight seal over the membrane covered hole. However, Doulgheridis discloses the use of a solid fusible material that, upon melting, creates an air tight seal on a food container after the air has been exhausted from the inside of the container (column 6, lines 20-30). Additionally Gere discloses sealing a container with bees wax or resin after air has been expelled (page 2, lines 105-150). Therefore, the filling of holes in food packages following venting of the food product was well known to one of ordinary skill in the art. As such, it would have

been obvious to provide an air tight seal after the oil or juice had cooled and the pressure equalized in the invention of Foth since it is notoriously well known that cooking oil becomes rancid with prolonged exposure to air and fruit juices undergo non-enzymatic browning with prolonged exposure to air.

Claims 2,4-7 are rejected under 35 U.S.C. 1O3(a) as being unpatentable over Hartung (US 4174784), in view of Gere (US 1925443) and Doulgheridis (US 2997397), as applied to claims 1 and 3 above, further in view of Jones (US 55221 55).

Hartung is silent in teaching PTFE or any particular pore size. Jones also teaches a cap for a container to release the vacuum of a container after cooling via hydrophobic/gas permeable membranes. Jones uses PTFE membranes or non-woven polyolefins (e.g. includes polypropylene) of 0.1-3 microns so that gas, or air, can pass through yet prevent bacteria from entering the container (Column 3, line 13 to Column 4, line 15, Column 5, lines 8-43). Therefore, it would have been obvious to modify Hartung and utilize PTFE membranes with 0.1-3 micron size pores since Jones teaches these membranes are hydrophobic/air permeable will assist to release the vacuum of a cooled container as well as offer the benefit of preventing bacteria from entering the container, which is important for mercantile products such as cooking oil and cranberry juice. One would have been substituting one hydrophobic/air permeable membrane for another for the same purpose: equalizing the pressure of a cooled container.

Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hartung (US 4174784), in view of Gere (US 1925443) and Doulgheridis (US 2997397), as applied to claims 1 and 3 above, further in view of Mussi et al. (US 5358872).

Regarding claim 8, Hartung is silent in teaching any particular size of hole in the cap for the gases to enter the container. Mussi et al. also teach a cap with a hole in the top utilizing a membrane to allow gases to pass into the container (Column 2, lines 18-46, Column 5, lines 25-61). Mussi et al. teach the gas exchange rate depends on the size of the hole and the size of the hole depends on the particular permeability of the membrane (Column 3, lines 26-30). Therefore to select any particular size hole for Hartung would have been obvious depending on the permeability of the membrane selected and the desired gas exchange rate.

Regarding claims 9-14, Hartung is silent in teaching a pressure adhesive, a semitransparent adhesive, actinic and UV radiation curable, or a dryable paint coating for the seal. Mussi et al. teach a cap with a hole in the top (i.e. items 20/23 of Figure 4), a hydrophobic air permeable membrane secured to the hole (item 22 of Figure 4) with an air tight seal utilizing a pressure-sensitive adhesive above the hole that includes acrylic adhesives, which are semi-transparent, actinic and UV radiation curable and dryable (the seal comprises item 32 of Figure 4, Column 2, lines 18-46,Column 5, lines 25-61). Therefore, it would have been obvious to include a pressure adhesive, a semitransparent adhesive, an actinic and UV radiation curable, and a dryable coating for the seal since Mussi et al. teaches an effective seal for a hydrophobic air permeable includes pressure-sensitive acrylic adhesives, which are semi-transparent, actinic and

UV radiation curable and dryable. It would have been further obvious to include a paint coating since acrylics are found in paints.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mussi et al. (US 5358872), in view of Gere (US 1925443) and Doulgheridis (US 2997397), as applied to claims 15, 17, 24, 25, 27-31, 38, 39, and 41-43 above, further in view of Mattson (US 5901867).,

Mussi et al. are silent in teaching including liner applied to the inside surface of the cap to secure the PTFE membrane. Mattson teaches securing a PTFE to the inside surface of a cap for the venting via a liner to provide a support backing that offers mechanical support and ease of handling the PTFE membrane (Column 1, lines 44-51, Column 4, lines 8-25). Therefore, it would have been obvious to modify Mussi et al. and provide a liner, or support backing, since Mattson teaches this would offer mechanical support and ease of handling the PTFE membrane.

Claims 23, 26, 37, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mussi et al. (US 5358872), in view of Gere (US 1925443) and Doulgheridis (US 2997397), as applied to claims 15, 17, 24, 25, 27-31, 38, 39, and 41-43 above.

Regarding claims 23 and 37, Mussi et al. are silent in teaching the particular hole size, but Mussi et al. teach the gas exchange rate depends on the size of the hole and the size of the hole depends on the particular permeability of the membrane (Column 3,

lines 26-30). Therefore to select any particular size hole would have been obvious depending on the permeability of the membrane selected and the desired gas exchange rate.

Regarding claims 26 and 40, Mussi et al. are silent in teaching the seal comprises a paint. However, it would have been obvious to include paint on the seal of Mussi et al. to serve as a means for labeling the contents since this would allow one to identify the contents of each container by looking at the cap.

Claims 45-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foth (US 5988448), in view of Gere (US 1925443) and Doulgheridis (US 2997397), as applied claim 44 above, further in view of Jones (US 5522155).

Foth is silent in teaching expanded PTFE or polypropylene membranes with 0.3-1.5 micron pores, and a hole of 50-100 microns. Jones also teaches a cap for a container to release the vacuum of a container and teaches utilizing hydrophobic/gas permeable membranes. Jones uses PTFE membranes or non-woven polyolefins (e.g. includes polypropylene) of 0.1-3 microns so that gas, or air, can pass through yet prevent bacteria from entering the container (Column 3, line 13 to Column 4, line 15, Column 5, lines 8-43). Therefore, it would have been obvious to modify Foth and utilize PTFE membranes or non-woven polyolefins, such as polypropylene, with 0.1-3 micron size pores since Jones teaches these membranes are hydrophobic/air permeable and still prevent bacteria from entering the container.

Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over as Foth (US 5988448), in view of Gere (US 1925443) and Doulgheridis (US 2997397), as applied claim 44 above, further in view of Mussi et al. (US 5358872).

Foth is silent in teaching any particular size of hole in the cap for the gases to enter the container. Mussi et al. also teach a cap with a hole in the top utilizing a membrane to allow gases to pass into the container (Column 2, lines 18-46,Column 5, lines 25-61). Mussi et al. teach the gas exchange rate depends on the size of the hole and the size of the hole depends on the particular permeability of the membrane (Column 3, lines 26-30). Therefore, to select any particular size hole for Foth would have been obvious depending on the permeability of the membrane selected and the desired gas exchange rate.

Claims 44, 45, and 52-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mussi et al. (US 5358872), in view of Gere (US 1925443) and Doulgheridis (US 2997397), as applied above, in further view of Bartur et al. (US 5853096).

Regarding claims 44, 45, 52, 53, and 55-57, Mussi et al. teach a cap with a hole in the top (i.e. items 20/23 of Figure 4), a PTFE membrane secured to the hole (item 22 of Figure 4lwith the hole covered by an air tight seal utilizing a pressure-sensitive acrylic based adhesives, which are semi-transparent, actinic and UV radiation curable and dryable (item 32 of Figure 4). Furthermore, because the cap is secured to the neck of

the container, the container includes a hole through the headspace (i.e. the neck of the container) with the membrane and air tight seal secured to the hole of the container (Column 2, lines 18-46,Column 5, lines 25-61). Mussi et al. are silent in teaching the hole on the side of the skirt portion of the cap. Bartur et al. also teach caps with hydrophobic gas permeable membranes. Bartur et al. teach including the membranes on the side of a skid portion of the cap (e.g. the Embodiment of Figure 3C, Column 3, line 55 to Column 4, line 8, Column 5, lines 35-42). Therefore, it would have been obvious to modify Mussi et al. and include holes on the side section since one would have substituting one hole location for another for the same purpose: container caps with hydrophobic gas permeable membranes.

Regarding claim 54, Mussi et al. are silent in teaching the seal comprises a paint. However, it would have been obvious to include paint on the seal of Mussi et al. to serve as a means for labeling the contents since this would allow one to identify the contents of each container by looking at the cap.

Response to Arguments

Applicant's argument that the prior art does not teach or suggest filling a hole with sealing material to form an air tight seal has been considered but is moot in view of the application of the Gere and Doulgheridis references above.

Applicant's other arguments focus on the fact that the claimed invention requires the seal to be on the skirt portion of the cap. The Examiner interprets the disclosure of Bartur to teach such a limitation, as discussed above. It is also noted that absent a

showing to the contrary by clear and convincing evidence it is not seen how the placement of the hole (as long as it is above the liquid level) is anything other than a matter of design choice.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah L. Kuhns whose telephone number is 571-272-1088. The examiner can normally be reached on Monday - Friday from 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached at 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SLK

S. Weinstein
STEVE WEINSTEIN 1761
PRIMARY EXAMINER
5/22/06

for M. Cano